

SRP researcher elected to National Academy of Sciences

By Anne Frances Johnson

Plant biologist Julian Schroeder, Ph.D., was awarded one of the highest honors in science April 28 — membership in the prestigious National Academy of Sciences (NAS). Schroeder's work in the University of California, San Diego (UCSD) Superfund Research Program (SRP) sheds light on how plants may help clean up soil and water that is contaminated with heavy metals.

"Julian has been a part of the SRP for more than 15 years," said [William Suk, Ph.D.](#), director of the NIEHS Superfund Research Program and chief of the Hazardous Substances Research Branch. "He is an outstanding scientist whose basic research is being translated in a number of ways to improve human health. Plus, he is a really nice guy," Suk continued. "His election to the NAS is certainly well-deserved."

Pioneering plant discoveries may solve difficult problems

Schroeder is widely recognized for his early groundbreaking work on plant ion channels, the molecular valves in cellular membranes that control the movement of ions into and out of the cell. Currently, [Schroeder's lab](#) is investigating the genes encoding plant ion channels, particularly those that play a role in the ability to tolerate stresses, such as drought, salinity, and heavy metals.

Studying how some plants are able to thrive in challenging, even highly toxic, environments may shed light on new ways to contain or clean up hazardous substances. Schroeder's work with the NIEHS-funded UCSD SRP focuses on the potential use of genetically engineered plant models for removal of heavy metals from soil and water. Two SRP Research Briefs have highlighted the team's work on [metal accumulation in plants](#) and [plants with natural resistance to heavy metals](#).

Linked Audio

[Listen to Schroeder discuss his research on the accumulation of heavy metals in plants, in this NIEHS podcast. \(6:30\)](#)

Illustrious honor for a distinguished career

Schroeder's innovative work has earned him worldwide recognition and a number of awards and appointments. Novartis Chair and distinguished professor in the Division of Biological Sciences at UCSD, Schroeder directs the Plant Systems Biology Graduate Training Program and co-directs [Food and Fuel for the 21st Century](#). He is also the current president of the American Society of Plant Biologists (ASPB), a professional society of over 4,000 members devoted to the advancement of the plant sciences.

Election to the [National Academy of Sciences](#) is one of the highest honors bestowed on U.S. scientists and engineers. NAS is a private, nonprofit organization established by Congress in 1863 to serve as an adviser to the federal government on matters of science and technology. The organization and its members provide unbiased advice to the nation and are dedicated to advancing science and its use for the general welfare.

(Anne Frances Johnson is a research and communication specialist for MDB Inc., a contractor for the NIEHS Division of Extramural Research and Training)



Schroeder's previous awards include the Charles Albert Shull Award from ASPB, a Presidential Young Investigator Award from the National Science Foundation, the Deutsche Forschungsgemeinschaft Heinz Maier-Leibnitz Prize, and the Blasker Award for Environmental Science and Engineering. He is also a Fellow of the American Association for the Advancement of Science. (Photo courtesy of Julian Schroeder)

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